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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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GUDRUN E. HUCKETT DRAUDT
SCHUBERTSTR. 15A
WUPPERTAL, 42289
GERMANY

EXAMINER	
LEE, LAURA MICHELLE	
ART UNIT	PAPER NUMBER
3724	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/709,344	REINBOLD ET AL.	
	Examiner	Art Unit	
	LAURA M. LEE	3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/05/2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-12,15 and 16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-12,15 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the pre appeal brief filed on 1/06/2010, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final)or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Boyer D. Ashley/

Supervisory Patent Examiner, Art Unit 3724

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 4-12 and 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray (U.S. Publication 2002/0069937) in view of Kujat et al.(U.S. Patent 6,964,330), herein referred to as Kujat and Therrien et al. (U.S. Patent 6,659,266), herein referred to as Therrien. In regards to claims 15, 16 Murray discloses a method for sawing pieces of wood in a sawing station (Figure 1), the method comprising the steps of: a. measuring the pieces of wood in a measuring station (paragraph [0038], lines 7-10);

b. sequentially and continuously (continuous feed, paragraph [0041]) transporting at a variable feeding velocity (variable speed conveyor; paragraph [0038]) on a transport device (infeed conveyor, 14 or alternatively conveyors 54/62) the pieces of wood (12) from the measuring station to a sawing station (saw, 26) and scanning (photocell 28) a position of each of the pieces of wood during transport on the transport device from the measuring station to the sawing station and sending input signals of the scanned position to a control unit (paragraph [0037);

c. cutting the pieces of wood (12) in the sawing station (26) in a transverse direction (see Figure 1) that is transverse to a transport direction of the pieces of wood in the sawing station while the pieces of wood are stopped briefly (paragraph [0038], last nine lines) to allow cutting in the transverse direction into at least two sections based upon measured results taken in the step a) (paragraph [0038], lines 7-10, and lines 63-end of paragraph) and monitoring a saw position (via log diameter information;

see paragraphs [0039 and 0040], especially lines 14-24 of paragraph 0039) of a saw in the sawing station and sending input signals of the saw position to the control unit;

d) recalculating and variably adjusting (variable feed conveyor), based upon the input signals of step b) and step c), the feeding velocity of the pieces of wood during transport according to step b) such that sequentially transported pieces of wood have minimal spacing relative to one another (i.e. increased throughput; paragraph [0039]) and a second piece of wood that trails a first piece of wood being cut in the sawing station is already transported into the sawing station (for example is already on conveyor 14 and/or 62) while the first piece of wood is still being cut.

The sawing station is considered as shown in Figure 1, after the defined measuring/ scanning station, which paragraph [0038] disclosed occurs prior to the logs arrival on conveyor 14.

Murray discloses that the conveyor, 14, is a variable speed conveyor, that continues to feed during the intervals when rolls 18, 19, 20, and 21 are stopped to buck the log. Alternatively, Murray discloses that that the infeed conveyor can be co-ordinated with the feed rolls 18, 19, 20, and 21 to stop and go in conjunction with them, and still obtain benefits in increased throughput, as the outfeed will continue to operate while the log is bucked. Therefore, Murray discloses that although the conveyor is normally run as a variably speed conveyor; it can also be coordinated to stop and go with the feed rolls that are processing the previously fed log. Murray discloses that the conveyor is normally run at a variable speed, which could mean one of two things; that the conveyor can be changed to process the logs at various discrete speeds, or

secondly that during a single run it is apparent that the speed of the conveyor is capable of being continuous changed. It is apparent from the totality of the disclosure that it is the second interpretation that the Murray intended. However, to the extent that it can be argued that variable speed conveyor implied discrete speeds, as there are a finite number of identified, predictable interpretations, it would have been obvious to one having ordinary skill in the art at the time of the invention to have presumed that the variable speed conveyor implied a continuously changing speed. Although, Murray does not go one step further and positively state that the variations in speed of the variable speed conveyor are also linked to the movement of the feed rolls and thus the processing the previously fed log, it is apparent from the disclosure, that that must be the case, in order that the logs are not processed so fast that they contact each other during transport, especially as increased throughput is the desired effect.

Furthermore, attention is also directed to the Therrien and Kujat lumber processing systems.

Therrien discloses a wood edger for cutting away irregularities left on the edges of wood products that are conveyed through a succession of transferring mechanisms to regulate the flow of the products to be possessed. These transferring mechanisms allow the changing of the speed of the production line according to the length of each incoming successive workpiece before the workpieces are directed through a scanning station. Therrien discloses at least three chain or belt conveyors 54, 56, 58 in combination with a sensing system (not shown) coupled to the control system to analysis the space between the successive workpieces and consequently increase or

decrease the feeding speed of the conveyors to provide a desired space between the two workpieces. Moreover, gaps in the conveyance line can be filled by adjusting the relative speed of the multiple chain conveyors and it is possible to vary the speed thereof according to the number of cants waiting in front of the scanning station. The scanning system sends information to the wood edger about the profile of the cants to determine the position of the saws before the arrival of the workpieces. This increased throughput of the workpieces through the scanner optimizes the productivity of the wood edge (see at least col. 5, lines 16-58 through col. 6, lines 1-65).

Kujat discloses the flow of workpieces through a lumber manufacturing planer mill with multiple stations that all feed the workpieces from multiple stations to a single sorter drive 40. Kujat discloses that the timing for the whole system is based on the position sensor of the sorter drive. The skip a lug drive, which feeds the workpieces to the sorter drive is synchronized in speed and position with the sorter drive. "The skip-a-lug variable frequency drive drives the infeed elevator transfer and the lugged incline transfer. Each of the grading station drives is synchronized to the speed and position of the skip-a-lug drive. The grading stations are therefore synchronized with the infeed elevator and lugged incline transfer. As the sorter drive changes speed, the skip-a-lug drive changes speed to stay synchronized with the sorter drive. In the event that the skip-a-lug drive needs to create an empty lug space for a cut-in-two board, the skip-a-lug drive slows down momentarily relative to the sorter drive. This creates an empty lug space. The grade station drives follow the position and speed of the skip-a-lug drive during this speed change so that the system stays synchronized." Each grading station

is also provided with "a position sensor on each drive, and uses the position output of these sensors to control the variable frequency drive attached to each section such that the position of each drive correctly matches the required positions at the boards and lugs (such as seen in FIG. 5) at each handoff location as the system speed ramps up or down or remains constant." Thus Kujat describes a system where multiple conveyor systems are controlled using variable frequency drives controlled by a position sensor controlled feed-back system to increase the throughput of the workpieces/boards through the sorter station. This desired increased throughput is controlled by speeding up the synchronizing and controlling the preceding conveying systems to control the gaps of the workpieces leading up to the sorter station (see at least col. 3, line 50 through col. 5, line 68).

Therefore, although Therrien and Kujat do not disclose a variable speed conveyor system that transport pieces of wood from a measuring station to a sawing station where the recalculation of the feeding velocity of the wood is due to the cutting of wood in a sawing station, they do teach an adaptable system of modifying the conveyor system speed of subsequent workpieces based upon the outputs and throughputs of preceding stations to minimize gaps in the workpieces and maximize the overall system speed. In the Therrien and Kujat devices, the scanning system and the sorter system are equivalent to the sawing station of Murray, in which subsequent workpieces are being conveyed to those systems. Those subsequent workpieces are being controlled on conveyors which are adjustable controlled by speed and processing of those

workstations as well as the gaps between subsequent workpieces leading up to those stations.

Although it appears that Murray already discloses that the variations in speed of the conveyor were imparted by the processing and transport of the prior logs, as that is the only variable that would affect the speed of the following log, especially as Murray in the next statement discloses that the conveyor can also run discretely stop and go with the feed rolls to the extent that it can be argued that this is not the case, then it would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized a conveyor and feedback system such as taught by both Therrien and Kujat to coordinate the movement of the logs with the processing of the sawing station such that the through-put (paragraph [0039]) is maximized as desired by the applicant and also the logs are safely transported such that they do not run into each other. It is also noted that the claimed first and second transport devices of claim 16 read on a first and second of the Therrien and Kujat variable speed conveyors which help to control the speed of the workpieces being possessed.

In regards to claim 4, the modified device of Murray discloses wherein the feeding velocity of the second piece of wood is continuously recalculated (based upon the speed of the feed rolls, 18, 19, 20 and 21; and see at least Therrien col. 6, lines 11-29; and Kujat at least col. 4, lines 28-38)

In regards to claim 5, the modified device of Murray discloses wherein the step of scanning (monitoring by photocell 28) in step b is done continuously and wherein the

control unit recalculates the feeding velocity based upon the continuously scanned pieces of wood (i.e. the position sensors of both Therrien and Kujat)

In regards to claim 6, the modified device of Murray discloses wherein a feeding velocity of the second piece of wood is controlled so as to minimize a distance between the first and second pieces of wood (i.e. variable feed conveyor; paragraph [0038] and see paragraph [0041]); and Kujat at least col. 5, lines 1-19 and Therrien at least col. 6, lines 11-29).

In regards to claim 7, the modified device of Murray discloses wherein in step a)a length of the pieces of wood is measured (i.e. a length of the defect; paragraph 003).

In regards to claim 8, the modified device of Murray discloses wherein in step a) defects of the pieces of wood is measured (paragraph [0003]).

In regards to claim 9, the modified device of Murray discloses the step of saving the measured results (see paragraph [0037]).

In regards to claim 10, the modified device of Murray discloses wherein in the measured results are used for recalculating and variable adjusting the feeding velocity according to step d (paragraphs [0038-0041); (the feed through of the Therrien scanner and the Kujat sorter).

In regards to claim 11, the modified device of Murray discloses wherein in step b) the pieces of wood are supplied without interruption to the sawing station (along infeed conveyor , 14).

In regards to claim 12, the modified device of Murray discloses the step of decoupling a drive for transporting the pieces of wood to the sawing station from a drive

of the sawing station (as the log is transferred from the conveyor 14 to the hour glass roll 16).

Response to Arguments

4. Applicant's arguments filed 4/05/2010 have been fully considered but they are not persuasive. Applicant's arguments as addressed to Murray are still not persuasive, and are maintained as addressed in the office action of 8/05/2009. Kujat and Therrien are added to the rejection in support of the examiner's previous position.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 7,694,614; U.S. Patent 7,578,382; U.S. Patent 7,694,614; U.S. Patent 5,685,410; U.S. Patent 4,879,752.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAURA M. LEE whose telephone number is (571)272-8339. The examiner can normally be reached on Monday through Friday, 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura M Lee/
Examiner, Art Unit 3724
6/21/2010